

and variable heavy ( $V_H$ ) domain of sequence:

(SEQ ID NO: 21)

QIQQLQQSGPELVKPGAPVKISKASGYTFTDYYIHVVNQRPQGLEWIGY  
IYPNGHNTVYNQKFKVRATLTADNPSSSTAYLQLNSLTSEDGSGVYFCAYDL  
FNYWGQGLTVTVSA;

and

d) a sequence substantially identical thereto.

11. The isolated or purified antibody or fragment thereof of any one of claims 1 to 10, wherein the antibody or fragment thereof specifically binds to the peptide: GLFGA-IAGFIEGGW (SEQ ID NO:26).

12. The isolated or purified antibody or fragment thereof of any one of claims 1 to 11, wherein the antibody or fragment thereof is a full-length IgG, Fv, scFv, Fab, or F(ab')<sub>2</sub>.

13. The isolated or purified antibody or fragment thereof of any one of claims 1 to 12, wherein the antibody or fragment thereof comprises framework regions from IgA, IgD, IgE, IgG, or IgM.

14. The isolated or purified antibody or fragment thereof of any one of claims 1 to 13, wherein the antibody or fragment thereof is chimeric.

15. The isolated or purified antibody or fragment thereof of claim 14, wherein the chimeric antibody or fragment thereof constant domain is from human IgG1.

16. The isolated or purified antibody or fragment thereof of claim 14, wherein the chimeric antibody or fragment thereof comprises human kappa 1 light chain and human IgG1 heavy chain constant domains.

17. A nucleic acid molecule encoding the isolated or purified antibody or fragment thereof of any one of claims 1 to 16.

18. A vector comprising the nucleic acid molecule of claim 17.

19. The isolated or purified antibody or fragment thereof of any one of claims 1 to 16, wherein the antibody or fragment thereof is immobilized onto a surface.

20. The isolated or purified antibody or fragment thereof of claim 19, wherein the surface is nitrocellulose.

21. The isolated or purified antibody or fragment thereof of any one of claims 1 to 16, wherein the antibody or fragment thereof is linked to a cargo molecule.

22. The isolated or purified antibody or fragment thereof of claim 21, wherein the cargo molecule is a detectable agent, a therapeutic agent, a drug, a peptide, an enzyme, a growth factor, a cytokine, a receptor trap, an antibody or fragment thereof, a chemical compound, a carbohydrate moiety, DNA-based molecules, a neutralizing agent, viral vector, one or more liposomes or nanocarriers loaded with any of the previously recited types of cargo molecules, or one or more nanoparticle, nanowire, nanotube, or quantum dots.

23. The isolated or purified antibody or fragment thereof of claim 21, wherein the cargo molecule is a neutralizing agent.

24. A composition comprising one or more than one isolated or purified antibody or fragment thereof of any one of claims 1 to 16 and 21 to 23 and a pharmaceutically-acceptable carrier, diluent, or excipient.

25. An in vitro method of detecting influenza hemagglutinin (HA), comprising:

a) contacting a biological sample or a viral suspension, with an isolated or purified antibody or fragment thereof according to any one of claims 1 to 16 linked to a detectable agent; and

b) detecting the detectable agent linked to the antibody or fragment thereof bound to hemagglutinin in the biological sample or a viral suspension.

26. The method of claim 25, wherein the biological sample is from: blood, serum, nasal wash, nasal swab, saliva or sputum.

27. The method of claim 25 or 26, wherein the step of detecting step b) is performed using: optical imaging, immunohistochemistry, molecular diagnostic imaging, ELISA, or other suitable method.

28. A method of preventing or treating influenza in a subject, comprising administering a pharmaceutically acceptable dose of an isolated or purified antibody or fragment thereof of any one of claims 1 to 16 and 21 to 23 to the subject.

29. A kit for detecting influenza HA comprising a support and an isolated or purified labelled-antibody or -fragment thereof according to any one of claims 1 to 16.

30. The kit of claim 29, wherein the support is nitrocellulose.

31. The kit of claim 30, wherein the isolated or purified labelled-antibody or -fragment thereof is immobilized onto the nitrocellulose.

32. An in vitro method for quantifying influenza HA, comprising:

a) contacting a biological sample comprising an isolated or purified antibody or fragment thereof according to any one of claims 1 to 16 linked to a detectable agent; and

b) quantifying the detectable agent linked to the antibody or fragment thereof.

33. The method of claim 32, wherein the step of detecting step b) is performed using:

optical imaging, immunohistochemistry (dot blot, slot blot, quantitative Western blot), molecular diagnostic imaging, ELISA (direct, indirect or competitive), or other suitable method.

34. The method of claim 33, wherein the immunohistochemistry is: dot blot, slot blot or quantitative Western blot.

35. The method of claim 33, wherein the ELISA is direct, indirect or competitive.

36. The method of claim 33, 34 or 35, wherein said biological sample is selected from: a purified vaccine or in-process supernatant, produced with a platform selected from: eggs, mammalian cells, and plant.

37. A kit for measuring influenza HA comprising: one or more than one antibody as defined in any one of claims 1 to 16; and a detection reagent for detecting the antibody bound to said influenza HA in a biological sample; a measuring reagent for measuring a level of the detection agent.

38. An isolated or purified antibody or fragment thereof, for the manufacture of a composition for the treatment or prevention of influenza in a subject.

39. An isolated or purified antibody or fragment thereof, for use in the treatment or prevention of influenza in a subject.

40. The method of claim 28, wherein the subject is a human or an animal.

41. The isolated or purified antibody or fragment thereof of claim 38 or 39, wherein the subject is a human or an animal.

42. The isolated or purified antibody or fragment thereof, wherein the antibody is selected from:

mAb 9D1 comprising sequences SEQ ID NO. 29 and 30;  
mAb 10A9 comprising sequences SEQ ID NO. 31 and 32;

and

mAb 11 H12 comprising sequences SEQ ID NO 33 and 34.